

CLAIMS

1. A separating device used for a toilet seat, in which a continuous mantle fully covers an annular seat frame, the device is attached on the base of the toilet seat by a rotating shaft, and the device mainly comprises a seat frame, a mantle, a mantle recovery device and a turning cap, characterized in that:
 - a). the seat frame, of the seat ring type or of the framed type, has a shape similar to a conventional seat ring, there is a fracture on the seat frame, one or more opening/closing part is (are) arranged at the fracture, one end of the opening/closing part connects with the other part of the seat frame, and the other end of it can open and close freely, when the opening/closing part closes, the seat frame appears a full circularity;
 - b). at the connecting part that connects the seat frame with the base, a blade is provided;
 - c). the mantle is made into a roll, after the mantle is unwound, it takes the shape of a long tube, the mantle is put on the surface of the seat frame, and the mantle is made of a plastic film, or other single or composite film materials that not only have a smooth inner surface but also is waterproof, and a referring sign is provided adjacent to the terminal end of the mantle.
2. The device according to the claim 1, characterized in that, the mantle is placed in a sealed mantle roll, the sidewall of which is cut to form a notch, two edges of the notch being close to each other tightly; the starting part of the mantle stays out of the notch.
3. The device according to the claim 1, characterized in that, a removable recovery roll of the mantle is provided in the mantle recovery device, the center shaft of the recovery roll engages with a power transmission mechanism, the

pressing flaps or other structures for fixing the mantle are provided on the center shaft.

4. The device according to the claim 1, characterized in that, the blade is fixed in the connecting part between the seat frame and the rotating shaft of the seat frame, along the edge of seat frame the connecting part is cut to form a groove, in which the blade is received.
5. The device as the claim 1, characterized in that, in the mantle recovery device, a driving roller engaging with the power transmission mechanism and a pressure roller opposite to the driving roller are provided, and the two rollers clamp the mantle between them so as to recover the mantle.
6. The device according to the claim 1, characterized in that, the rotating shaft of the seat frame engages with the power transmission mechanism, when the mantle is to be replaced, the power transmission mechanism drives the rotating shaft to rotate, as a result the seat frame is raised up.
7. The device according to the claim 1, characterized in that, the rotating shaft of the seat frame engages with gear chains of the power transmission mechanism, and a controller engages with the latter, during different stages for replacing the mantle, the controller controls the gear chains to rotate forward and backward, or stop rotating, accordingly the rotating shaft rotates along with the gear chains, and finally the seat frame is lifted up or lowered down.
8. The device according to the claim 1, characterized in that, the mantle recovery device makes use of electric power, and a switch of the recovery device may be a conventional touch switch or other non-touch switch.

9. The device according to the claims 1 or 8, characterized in that, the mantle recovery device makes use of electric power, a electric motor thereof is connected to a controller, once the electric motor or the driving roller rotates for a predetermined time or a predetermined number of turns after startup, it will stop working, at this time the new mantle will cover exactly the entire seat frame.
- 5
10. The device according to the claims 1 or 8, characterized in that, an UV sterilamp is provided at the inputting end from which the mantle is put on the seat frame, and the UV sterilamp is connected to the controller, when the mantle is replaced, the UV sterilamp is on; and when the replacement completed, the UV sterilamp is off.
- 10